

AMENDMENT TO THE SPECIFICATION

The following amendments to the Specification are hereby made in order to move the Brief Description of the Drawings from page 33 to page 10:

Following the paragraph on page 10 which begins "The program also permits the computer to perform" and ends "in order to extract the characteristic," insert text as follows:

3. Brief Description of the Drawings:

Fig. 1 is a diagram for explaining an example mesh generation process according to one embodiment of the present invention.

Fig. 2 is a diagram for explaining the general configuration of a mesh generation system according to the embodiment.

Fig. 3 is a diagram for explaining the elements used for specifying the characteristic of a mesh employed for the embodiment.

Fig. 4 is a diagram for explaining the method for calculating a tensor for a node of a mesh used for the embodiment.

Fig. 5 is a diagram showing an example mesh characteristic transform process, according to the embodiment, for changing the mesh size while leaving the direction of flow and the aspect ratio unchanged.

Fig. 6 is a diagram showing another example mesh characteristic transform process, according to the embodiment, for changing the direction of flow while leaving the mesh size and the aspect ratio unchanged.

Fig. 7 is a diagram showing an additional example mesh characteristic transform process, according to the embodiment, for changing the aspect ratio while leaving the direction of flow and the mesh size unchanged.

Fig. 8 is a diagram showing an additional example mesh characteristic transform process, according to the embodiment, used for a different shape model while leaving the direction of flow, the mesh size and the aspect ratio unchanged.

Fig. 9 is a flowchart showing the processing performed by the mesh generation system according to the embodiment.

Fig. 10 is a flowchart showing the processing, according to the embodiment, for generating a new mesh using multiple template meshes.

Fig. 11 is a diagram for explaining the general configuration of a mesh generation system according to another embodiment.

Fig. 12 is a diagram for a mesh generation example, according to the embodiment, for generating a mesh while leaving a tensor field extracted from a template mesh unchanged.

Fig. 13 is a diagram for another mesh generation example, according to the embodiment, for generating, for the same shape model, several types of different size meshes having the same characteristic.

Fig. 14 is a diagram for a mesh generation example accompanying the extrapolation of a tensor field, according to the embodiment, for generating a mesh for a quadrilateral shape model by using, as a template mesh, a mesh generated for a circular shape model.

Fig. 15 is a diagram for explaining the process for generating a mesh using a tensor field extracted from a template mesh in Fig. 14.

Fig. 16 is a diagram for another mesh generation example accompanying the extrapolation of a tensor field, according to the embodiment, for generating a mesh for a rectangular shape model by using a template mesh extracted from a predetermined shape model.

Fig. 17 is a diagram for an additional mesh generation example accompanying the extrapolation of a tensor field, according to the

embodiment, for generating a mesh for a rectangular shape model by using a template mesh extracted from another predetermined shape model.

Fig. 18 is a diagram for a further mesh generation example accompanying the extrapolation of a tensor field, according to the embodiment, for generating a mesh for a rectangular shape model by using a template mesh extracted from an additional predetermined shape model.

Fig. 19 is a diagram showing a mesh generation example, according to the embodiment, for generating a mesh based on a template mesh that is obtained in advance by providing inner line restrictions.

Fig. 20 is a diagram showing another mesh generation example, according to the embodiment, for generating a mesh based on a template mesh that is obtained in advance by providing inner line restrictions.

Fig. 21 is a flowchart for explaining the use of a computer for the design cycle in a manufacturing process.

Fig. 22 is a diagram for explaining a conventional mesh generation process.

[Description of the Symbols]

10, 20: Mesh generation system

11: Mesh characteristic extraction unit

12: Mesh characteristic change unit

13: Mesh generator

21: Tensor field extrapolation unit

Beginning at the bottom of page 33, delete text as follows:

3. Brief Description of the Drawings:

——— Fig. 1 is a diagram for explaining an example mesh generation process according to one embodiment of the present invention.

——— Fig. 2 is a diagram for explaining the general configuration of a mesh generation system according to the embodiment.

——— Fig. 3 is a diagram for explaining the elements used for specifying the characteristic of a mesh employed for the embodiment.

——— Fig. 4 is a diagram for explaining the method for calculating a tensor for a node of a mesh used for the embodiment.

——— Fig. 5 is a diagram showing an example mesh characteristic transform process, according to the embodiment, for changing the mesh size while leaving the direction of flow and the aspect ratio unchanged.

——— Fig. 6 is a diagram showing another example mesh characteristic transform process, according to the embodiment, for changing the direction of flow while leaving the mesh size and the aspect ratio unchanged.

——— Fig. 7 is a diagram showing an additional example mesh characteristic transform process, according to the embodiment, for changing the aspect ratio while leaving the direction of flow and the mesh size unchanged.

——— Fig. 8 is a diagram showing an additional example mesh characteristic transform process, according to the embodiment, used for a different shape model while leaving the direction of flow, the mesh size and the aspect ratio unchanged.

——— Fig. 9 is a flowchart showing the processing performed by the mesh generation system according to the embodiment.

——— Fig. 10 is a flowchart showing the processing, according to the embodiment, for generating a new mesh using multiple template meshes.

——— Fig. 11 is a diagram for explaining the general configuration of a mesh generation system according to another embodiment.

——— Fig. 12 is a diagram for a mesh generation example, according to the embodiment, for generating a mesh while leaving a tensor field extracted from a template mesh unchanged.

——— Fig. 13 is a diagram for another mesh generation example, according to the embodiment, for generating, for the same shape model, several types of different size meshes having the same characteristic.

——— Fig. 14 is a diagram for a mesh generation example accompanying the extrapolation of a tensor field, according to the embodiment, for generating a mesh for a quadrilateral shape model by using, as a template mesh, a mesh generated for a circular shape model.

——— Fig. 15 is a diagram for explaining the process for generating a mesh using a tensor field extracted from a template mesh in Fig. 14.

——— Fig. 16 is a diagram for another mesh generation example accompanying the extrapolation of a tensor field, according to the embodiment, for generating a mesh for a rectangular shape model by using a template mesh extracted from a predetermined shape model.

——— Fig. 17 is a diagram for an additional mesh generation example accompanying the extrapolation of a tensor field, according to the embodiment, for generating a mesh for a rectangular shape model by using a template mesh extracted from another predetermined shape model.

——— Fig. 18 is a diagram for a further mesh generation example accompanying the extrapolation of a tensor field, according to the embodiment, for generating a mesh for a rectangular shape model by using a template mesh extracted from an additional predetermined shape model.

——— Fig. 19 is a diagram showing a mesh generation example, according to the embodiment, for generating a mesh based on a template mesh that is

obtained in advance by providing inner line restrictions.

—— Fig. 20 is a diagram showing another mesh generation example,
according to the embodiment, for generating a mesh based on a template mesh
that is obtained in advance by providing inner line restrictions.

—— Fig. 21 is a flowchart for explaining the use of a computer for the
design cycle in a manufacturing process.

—— Fig. 22 is a diagram for explaining a conventional mesh generation
process.

[Description of the Symbols]

10, 20: Mesh generation system

11: Mesh characteristic extraction unit

12: Mesh characteristic change unit

13: Mesh generator

21: Tensor field extrapolation unit